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CLINICAL MEDICINE

LEADING ARTICLES

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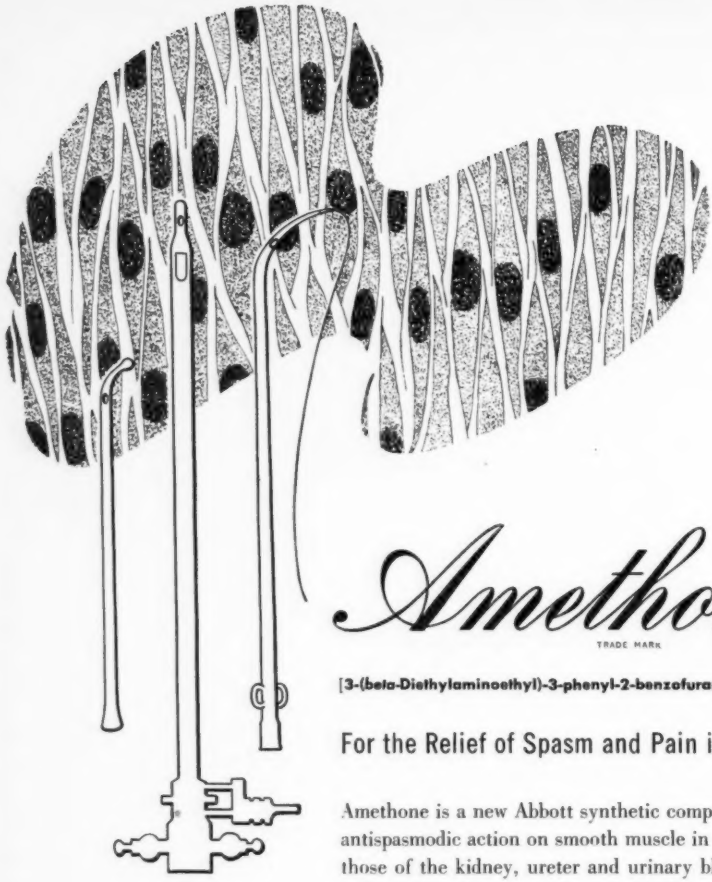

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Prevention of Complications Following Abdominal Surgery*

By ALBERT O. SINGLETON, M.D.
Professor of Surgery, Texas University, Galveston, Texas

Introduction

THERE has been a marked reduction in the mortality rate following abdominal surgery during the last ten years, because we know the complications of abdominal surgery and their causes.

We put the alimentary tract at rest and keep up the normal functions of the body. The intestinal tract is put at rest by keeping water and food out of the mouth. It is very important to keep the intestinal tract free from gas, as gas causes stimulation to peristalsis, more so than food or water.

If we keep the intestinal tract quiet, we prevent perforation of the bowel, intestinal obstruction, and peritonitis, such as occurs from a leaking suture line.

Abdominal Distention

Abdominal distention was formerly a very common complication. Laxatives were used in attempts to prevent distention, but usually resulted in more gas formation. Enemas of various compounds were used in treatment of distention.

We now know that gas does not result from the decomposition of food. *All gas can be disregarded except swallowed air. If one can remove air that has been swallowed no distention will take place.* This fact has been proved experimentally by mechanically obstructing the intestine of dogs. Also experimentally and clinically it has been shown that a gastrostomy, in which no air is swallowed, is never accompanied by distention or passage of gas.

A study of the composition of intestinal gas shows that nitrogen comprises 84%. Nitrogen cannot be absorbed by the intestine.

Clinical Application

A gastric suction tube is inserted through the nose *before* any abdominal surgery. If the tube and suction apparatus are kept working efficiently these patients will never become distended.

Other advantages of the preoperative placing of the suction tube are:

1. The patient cannot vomit during or after the operation.
2. The patient cannot inhale vomitus.
3. The anesthetist cannot force gas into the stomach.
4. Air swallowed by the patient because of the bad taste of the anesthetic is promptly removed.

Dilatation of the stomach is prevented. Abdominal distress and distention are prevented. *All patients will accept the tube if they are told they will not have gas pains as long as the tube is in place.* It is good psychological practice to have the patient see the material and gas being removed from his stomach.

The tube is left in until peristalsis is definitely restored.

Restoring Normal Body Function

The patient loses hydrochloric acid from his stomach, which would normally be used in forming sodium chloride. There is little loss of body fluids because these patients drink fluids frequently, some of which must be absorbed. Two-thirds of the patients studied gained fluids, and those who lost, lost only an average of 370 c.c.

1. *Fluids:* If the patient is excreting 1,000 c.c. of urine daily, his intake of fluids is satisfactory. In Texas we give 3,000 c.c. of 5% glucose solution without salt, either intravenously or subcutaneously. (Higher concentrates of glucose

* Notes taken by a CLINICAL MEDICINE staff physician from a paper given at the war time graduate meeting. McClosky General Hospital, Temple, Texas, May 16, 1945.

act as a diuretic, thus carrying more fluids out of the body.

2. *Sodium:* Sodium chloride is regulated carefully. Not too much should be given or the sodium will be retained in the tissues and edema will appear. This is especially true if the kidneys are impaired. The average patient needs roughly 10 grams of sodium chloride daily. This amount must be increased if the patient is sweating. 1,500 c.c. physiological saline solution will furnish 12 grams sodium chloride. One should really give more than this amount.

3. Other electrolytes are not so important. Glucose can be furnished in the form of 5% glucose in water. Nitrogen can be given either in the form of amino acids or blood plasma or transfusion.

Duration of Suction

Suction is not used for a simple appendectomy in a child, as children's peristaltic reflex is better.

Operation	Duration of Suction
Child's Appendectomy	None
Adult's uncomplicated appendectomy	24 to 36 hours
Ruptured appendix	48 to 72 hours
Acute cholecystitis or removal of gallbladder	48 to 72 hours
Resection of stomach, colon, or rectum	72 to 96 hours

When to Remove the Tube

The tube is clamped for four hours. The patient is then given a measured amount of water and the amount removed by suction at the end of ½ hour's time observed. If practically all the fluid is retained in the stomach, the suction tube must be kept in. If little of the water returns, the tube may be removed.

Cautions

The suction tube and apparatus must be watched closely for stoppage. The causes of stoppage are:

1. The tube has been inserted too far and is aspirating the intestinal secretions including bile which are necessary for the body. The tube is in too far and is kinked.
2. The tube is not in far enough to enter the stomach.
3. A mucus plug is blocking the tube.

A size 16 tube should be used so that it will not become obstructed easily.

Note: It is not necessary to have the tube in the duodenum or small bowel because it is used *preventively* and it is only necessary to remove swallowed air.

Common Mistakes in Neurologic and Psychiatric Diagnosis

By BEVERLY R. TUCKER, M.D.
Richmond, Virginia

OF the organic neurologic conditions, I think that the three most commonly missed by the general practitioner are:

1. Multiple (disseminated) sclerosis.
2. Combined sclerosis connected with anemia, especially pernicious anemia, which is frequently called neuritis by the general practitioner.
3. Brain tumor.

It's odd that disseminated sclerosis (multiple sclerosis), is so often diagnosed as hysteria. The differential diagnosis between embolus, thrombus and hemorrhage of the brain is frequently incorrectly made.

Another condition that should be better generally recognized is the difference between idiopathic epilepsy and that form of recurrent convulsions beginning during adolescence due to hypopituitarism.

In the neuropsychiatric states, every kind of misdiagnosis is made and the same may be said about genuine psychoses. Although those of us who are doing this work are tremendously overworked, I do not think that the general practitioner should attempt to diagnose these cases without consultation and he certainly should not attempt to treat them unless he has had some definite training along this line.

Danger of Confusing Hypermetabolism With Hyperthyroidism

By J. WILLIAM HINTON, M.D., New York, N. Y.

THE elevated basal metabolic rate or hypermetabolism has been assumed, in recent years, to be synonomous with hyperthyroidism. This has been brought about by the routine use of the basal metabolic test as a laboratory procedure. In cases of hyperplastic thyroid disease the diagnosis of hyperthyroidism has been made much earlier and before the cardinal signs and symptoms have developed as were known a decade ago.

Is Hyperthyroidism Present?

Therefore patients are frequently seen in thyroid clinics who present a diagnostic problem as to whether they have a true hyperthyroidism or merely a hypermetabolism.

A metabolic test to be accurate has to be properly performed. Dr. Cameron Bailey's services in the respiratory laboratory for the past 25 years would seem to eliminate the element of error in our laboratory studies.

Drug Causes

Hypermetabolism is frequently due to the use of an unrecognized drug. The common offenders are adrenalin, benzedrine, dinitrophenol, dinitro-orthocresol, or some weight reducing agent other than thyroid and caffein from coffee, tea or cola drinks.

In a well organized thyroid clinic, one is impressed by the fact that the follow-up results from sub-total thyroidectomy in questionable cases of hyperthyroidism are far from satisfactory, but the end results from sub-total thyroidectomy in the classical cases of hyperthyroidism are most gratifying. In recent years in the Thyroid Clinic of the New York Post-Graduate Hospital, which has been manned by three internists, one cardiologist, one neurologist and three surgeons, we have studied these questionable cases of hyperthyroidism with blood iodine, cholesterol, metabolic determinations and galactose tolerance tests, but *most important*, have evaluated these patients clinically in our weekly conference. The clinical opinion of the majority of the attending, usually eight, physicians, in conjunction with the laboratory data, has established the diagnosis of either hyperthyroidism or hypermetabolism.

Differential Diagnosis

We are convinced there is a definite distinction between hypermetabolism and hyperthyroidism. How to differentiate between the two entities is difficult, both clinically and by laboratory studies. Patients will frequenly present an elevated metabolic rate in whom the clinical picture does not conform to that of a hyperthyroidism and in whom no other organic disease can be discovered to account for the elevated basal metabolic determination. One should not confuse the elevated metabolism of the patients with cardiac disease or hypertension with the hypermetabolism without organic disease. J. H. Means has emphasized the *state of well being in the patient with hypermetabolism* as contrasted with the patient with hyperthyroidism who appears ill.

"Recurrent" Hyperthyroidism

It is our feeling that a large percentage of the so-called recurrent or persistent hyperthyroidism are neither recurrent or persistent but due to the original diagnosis of hyperthyroidism having been erroneous while the patient was suffering from hypermetabolism.

Therapeutic Test

We have at our disposal a very simple therapeutic test as an aid in differentiating between hypermetabolism and hyperthyroidism and that is the administration of iodine in the form of Lugol's solution. If 10 drops of Lugol's solution is given t.i.d. for 10-14 days, one will invariably get a marked drop in the metabolic reading in hyperthyroidism and little if any reduction in hypermetabolism. Also, on discontinuing the Lugol's solution the metabolic rate will return to its original level in 14-21 days.

130 East 79th Street

The General Treatment of Arthritis

A Summary of Current Trends

By CAPT. C. D. MARPLE (M.C.), Los Angeles, California

ARTHRITIS, the most prevalent chronic disease in the United States, is second only to mental and nervous diseases as a cause for days lost from work each year. The two principal types: Rheumatoid, or atrophic, and osteo-arthritic or hypertrophic must be distinguished because of the great difference in treatment and in prognosis between them.

Arthritis is a national problem of great economic gravity, which must be attacked by physicians on all planes and by all possible methods. It is a constitutional disorder requiring broad and continued treatment: panaceas do not exist. Early and intensive treatment will permit a useful life in three quarters of rheumatoid cases; one quarter will require prolonged hospitalization and reconstructive surgery. The complex background and the lack of specific therapeutic agents in arthritis offers a challenge to the profession.

DIFFERENTIAL DIAGNOSIS

	Rheumatoid Arthritis	Hypertrophic Arthritis
INCIDENCE	A constitutional disease of early life, esp. 20-30 years, more prevalent in women (except Marie-Strumpell type).	Disease of middle and old age, rare under 45; occurs in 97% of old people.
JOINTS INVOLVED	Usually symmetrical and bilateral involvement of small joints, as 2nd joints of fingers, wrists, elbows, knees, ankles and metatarsals.	Chiefly in larger joints, as neck, back, hips, knees and terminal phalanges (Heberden's nodes).
PATHOLOGY	Primarily an inflammatory process of synovia and periarticular tissues.	A bone disease with little soft tissue change: bone edges develop ridges and spurs; cartilage is eroded and friable.
PHYSICAL EXAMINATION	Stiffness, swelling, heat soreness and pain. Early: Fluid in joint. Late: ankylosis, or unstable joint. Extensive and crippling deformity.	Rarely swelling or heat, but tenderness over spurs and pain on use or with change in weather. No ankylosis and rarely crippling except in hips and knees.
X-RAY	Soft tissue swelling and atrophy of bone near joints. Later, cartilage thinned and joint space narrowed with irregular borders. Freqently ankylosis when advanced. X-rays of hands especially valuable.	Bony lipping and spurs on the edges of the joints.
LABORATORY	Anemia, rapid erythrocyte sedimentation rate, low sugar tolerance, positive agglutination test for hemolytic streptococci in 50% cases.	No laboratory changes directly attributable to the hypertrophic arthritis.

TREATMENT

	Rheumatoid Arthritis	Hypertrophic Arthritis
PHILOSOPHY	Object: to stop course of disease and to prevent deformities. Must discover emotional reactions which precipitate attacks, habits which are not desirable, insecurities which lead to frequent exacerbations of the disease.	Object: to check growth of ridges and spurs and to stop pain. Eliminate slight traumas and strains due to faulty posture, overweight, occupational traumas and chronic irritations, e.g., tight shoes and hallux valgus.
REST	Initial bed rest for fatigue and underweight. Patients do better in hospital, away from home and under closer medical supervision.	First principle is rest of involved joints, oft best obtained in plaster. Hospitalization needed in acute strain where complete rest and immobilization are indicated.

TREATMENT (Cont'd)

	Rheumatoid Arthritis	Hypertrophic Arthritis
PHYSIOTHERAPY	Moist heat, including steam baths, hot fomentations, etc., ideal with massage to relieve spasm and promote circulation. Bakes, diathermy and heat lamps also useful.	Heat is always advisable to promote circulation and to relieve soreness and pain. Moist heat is preferred.
IMPROVEMENT OF POSTURE AND MUSCLE TONE	Morning and evening exercises aid digestion and increase circulation. Involve rest positions and exercises to improve tone of whole body as well as involved joints. Use of a firm surface on which to both rest and to perform exercises is essential.	Permanent relief from pain comes mainly from relief of the strain of poor posture by special rest positions and exercises, performed several times a day and increased in number and frequency as tolerance is extended. Involve deep breathing, use of muscles of pectoral and pelvic girdles and abdominal muscles in position of hyperextension of spine.
DIET	Low carbohydrate diet where sugar tolerance is poor; whole grain cereal instead of processed; rich vitamin and mineral intake. Frequently there is need for supplemental vitamins A, B and C. Dilute HCl when gastric hypoacidity is present.	Diet is not ordinarily important therapeutically, but a low carbohydrate diet is indicated in obesity.
DRUG THERAPY	Gold salts, starting with doses of 10 mgms. and increasing to 50 mgms. weekly give good results. Must watch for toxic reactions: rashes, anemia, leukopenia, thrombocytopenia and hepatic and renal damage. Sulphur, bee venom and snake venom are of little value.	Osteo-arthritis is not benefited by gold salts, or any other drugs, with the possible exception of the salicylates to relieve pain. Some cases of "menopausal arthritis" are improved on estrogenic therapy. Constipation should be combatted with mild remedies.
X-RAY THERAPY	X-ray therapy, 150 R at each sitting, each treatment over a different area, twice weekly for 6 treatments: series repeated as indicated after intervals of 4-8 weeks, often gives excellent results, esp. in Marie-Strumpell type.	No benefits may be expected.
PREVENTION OF DEFORMITY	Rest and immobilization in most comfortable corrected position best obtained by light bivalved cast with early cautious exercise. Flexion deformities due to muscle spasms and contraction usual.	Plaster immobilization and use of corsets and braces relieves strain and faulty posture. Elastic knee supports and arch supports sometimes helpful. Flexion deformities do not usually offer a problem.
CHRONIC INFECTION	Removal of "foci of infection" should be considered with the utmost conservatism. Often improves general state, rarely produces spectacular results. Sulphonamides and penicillin do not alter the course of the arthritis.	Hypertrophic arthritis is a degenerative disease and its course is ordinarily not altered by chronic infections. Removal of foci, other things being equal, improves the patient's general condition.
SURGERY	Specialized surgery, e.g., synovectomies, posterior capsuloplasties, arthroplasties and arthrodeses, esp. in knees and elbows, are helpful, but never prevent deformity.	Operative removal of bony ridges and spurs is rarely permanently successful as they tend to recur.
ENVIRONMENTAL FACTORS	The physical and mental environment of the patient is important. Physically these include conditions at home and at work, adequacy of food, dress and rest, suitable climate. Mental equanimity, happy relationships and absence of fear are necessary for success with other therapeutic measures. Reeducation of patient and family often essential to recovery, or to tolerance of the disease. Both Walter Bauer and Loring Swaim have found that over 50% of their cases were aggravated on occasions of emotional disturbances in the patient's life.	

1200 N. State St.

Recent Developments in the Diagnosis and Treatment of Thyroid Diseases*

THRYTOXICOSIS is a widespread muscular disease. Muscular weakness and atrophy may occur without exopthalmos or a very high basal metabolic rate (as a plus 25).

Clinical Thyrotoxicosis

1. Eye signs.
2. Goiter
3. Nervousness and trauma.
4. Tachycardia.
5. Weight loss.
6. Muscle weakness.
7. Sensitiveness to heat (insensitiveness to cold).
8. Good appetite.
9. Elevated basal metabolic rate.

Muscular weakness appearing in arm or leg is often due to undiagnosed thyrotoxicosis. Such patients should be watched, without medicine, for a time and tachycardia should be checked again.

Diagnosis

1. Increased basal metabolic rate.

2. Response to treatment: The patient is put at rest for a control period and either iodine or thiouracil is given.

3. The serum protein iodine level: The protein-bound iodine level follows the excretion of thyroid hormone closely. *Elevated basal metabolic rate* may be due to:

1. Fever.

2. Anxiety state.

3. High blood pressure. Hypertension: Heart disease. The increasing heart load increases the amount of oxygen used, giving a false high basal metabolic rate.

4. Leukemia.

5. Arteriovenous aneurysm.

The prognosis is better in patients who have cardiac disease when it is due to thyrotoxicosis. Irreversible damage may occur in muscular disturbances due to thyrotoxicosis.

Malignant exophthalmos may be progressive and if so prognosis is poor. One may predict those liable to this complication by the exopthalmos and edema around the eye prior to operation or treatment. Decompression of the orbit may be necessary. Small doses of thyroid extract should be given for a long time and one may add iodine.

Nodular glands One should examine for an early malignancy.

Myopathy: These patients may exhibit atrophy of the arm or shoulder girdle. They do not retain creatin as normal persons do. There is a poor outlook for persons with a combined thyrotoxicosis and muscular disease unless recognized and treated. After the administration of thiouracil, the basal metabolic rate drops toward normal and muscular strength increases.

Thyrotoxicosis with myasthenia gravis may be diagnosed by the improvement which follows the injection of Prostigmine and the aggravation of symptoms which follows the administration of quinine.

The Treatment of Thyrotoxicosis

1. Iodine prececds subtotal thyroidectomy.

2. Thiouracil plus subtotal thyroidectomy.

3. Iodine plus thiouracil, plus subtotal thyroidectomy.

4. Iodine alone.

5. Thiouracil alone.

6. X-ray treatment.

7. Radioactive iodine.

Thiouracil controls thyrotoxicosis better than iodine. It causes the thyroid gland to become larger and more vascular. It will control thyrotoxicosis in most patients, but not if iodine was given previously. If should be administered for at least five weeks to such patients. Iodine is not as effective if thiouracial has been given previously.

Radioactive iodine: The intravenous injection of radioactive iodine provides tracer doses, which are taken up by the

* Notes taken by a CLINICAL MEDICINE staff physician; war time graduate meeting, Denver, Colorado, March 15, 1945, at university of Colorado School of Medicine.

thyroid gland, with good therapeutic results.

Thiouracil denies the body thyroid hormone. Dosage: 0.2 grams twice daily for three months, 0.1 gram twice daily for three months, and 0.1 gram once daily for three months. White blood counts should be taken weekly because of the danger of leukopenia and agranulocytosis, which may terminate fatally. Skin reactions also occur. Ten per cent of patients may be expected to have a reaction of some type while taking thiouracil.

Discussion

Thyrotoxicosis results in muscular waste (which may result in primary myopathy and muscular weakness).

The western states are the Switzerland of America as far as thyroid disease is concerned. In thyroid crisis one may be justified in injecting intravenously 50 to 100 cc. of adrenal cortex. There are no contraindications to this treatment. Thiouracil is as effective in treating adenoma as in treating exopthalmic goiter.

If iodine has been given first it may take thiouracil six weeks or more to relieve symptoms, as contrasted with the few days necessary when thiouracil is given a patient who has received no iodine.

Hemoptysis

Tuberculosis, acute edema of the lung, pulmonary embolism, pneumonia, bronchiectasis, pulmonary abscess, broncholithiasis, carcinoma of the lung, adenoma of a bronchus and idiopathic bleeding are the more common causes of expectorating blood.

Hemorrhage occurs in one-third of all cases of pulmonary tuberculosis before the diagnosis is made.

Acute Edema of the Lung: Acute edema of the lung, characterized, by dyspnea, bubbling respiration ("the death rattle") and coughing of thin, bloody or pink sputum, must be treated by (1) oxygen, (2) venesection, (3) intravenous diuretics.

Pulmonary Embolism: Embolism of the lung may be prevented, in most cases, by preventing stagnation in leg veins; it should be treated by the immediate intravenous injection of ½ gr. (0.032 Gm.) of papaverine and 1/100 gr. (0.00065 Gm.) of atropine to prevent reflex constriction of pulmonary vessels.

Pneumonia: Expectoration of blood is often one of the cardinal symptoms of pneumonia and may be the first sign to indicate that a serious disease is present. Sulfonamides, penicillin, oxygen and good nursing care are required.

Bronchiectasis: Recurrent hemoptysis is often caused by bronchiectasis.

Pulmonary Abscess: The onset of lung abscess may be as insidious as that of tuberculosis. Tonsillectomy and pneumonia frequently precede.

Lung Carcinoma: "Pneumonia" that does not clear up in 3 weeks, may actually be a patch of pneumonitis beyond a bronchus blocked by cancer. Recurrent attacks of fever occur with cough, sputum and hemoptysis.

Adenoma of a Bronchus: Recurrent attacks of hemorrhage, usually severe, in patients under 40 years should make one suspect bronchial adenoma. It can be treated bronchoscopically or by operation without high risk.

Broncholithiasis: A calcareous lymph node eroding into the trachea or bronchi may cause severe symptoms: Hemoptysis, severe cough, chest tightness, possibly with asthmatic type breathing; or recurrent pneumonitis, chills, fever, malaise and loss of weight. Calcified material may be coughed up or seen bronchoscopically or on the chest x-ray.

Idiopathic Bleeding: Repeated hemoptysis may be accompanied by a negative physical examination, x-ray and history, yet on bronchoscopic examination it is noted that the least manipulation of the bronchial mucosa is followed by oozing of blood. Curettage of the mucosa followed by sulfanilamide powder insufflation usually stops the bleeding. — H. J. Moersch, M.D., in *Med. Clin. N. Am.*,

Rheumatic Fever VI: Diagnostic Problems Encountered on a Rheumatic Fever Service

By BERNICE WEDUM, M.D.*

OF 523 children referred to our diagnostic service, 214 (40%) did not have heart disease. Seventy-three had other diagnoses made including bronchiectasis, asthma, osteomyelitis, chronic upper respiratory infections and anemia.

Clinical Diagnostic Problems

1. Systolic murmur.
2. Joint and muscle pains.
3. Infection.
   a. Elevated sedimentation rate.
   b. Low grade fever of unknown cause.
4. Tachycardia.
5. Epistaxis.
6. Purposeless movements.
7. Abdominal pain.
8. Enlarged heart.
9. Borderline electrocardiogram (EKG).
10. High blood pressure.

Systolic Murmur

Systolic and other murmurs, and abnormal heart sounds cause diagnostic difficulties. Physiologic systolic murmers occur in as high as 80% of normal children. They are most common over the pulmonic area and left sternal border, but also occur at the apex.

Heart Sounds in Children

The first heart sound is usually clearly heard; if faint in the recumbent position it may be normal in the erect position.

A diminished first sound in all positions may indicate heart disease. It sometimes is accompanied by a prolonged pulse-respiration interval indicating previous rheumatic infection although no significant murmur may be present. Dr. Abe Ravin made this observation and clinical experience confirms it.

Accentuated first sound may occur in mitral stenosis or may be normal. It also occurs in neurocirculatory asthemia. Slurring of the first sound often occurs.

Accentuation of second sound may occur normally, be split or reduplicated; the pulmonary sound is normally greater than the aortic (P.A.) Marked accentuation of pulmonic second sound may accompany both.

Meaningless Sounds: Congenital and rheumatic heart disease.

1. Systolic "click" in child or adult.

2. The third sound is often unimportant, unless it develops suddenly; it is loud, it may sound like a "gallop" and may be confused with a mid-diastolic murmur.

3. Venous hum — a continual roaring above the right clavicle and sometimes above the left; compression of the jugular vein stops the sound.

Murmurs

Acute infections with fever and tachycardia prevent evaluation of a murmur.

Anemia is a *rare* cause of murmurs unless acute and severe.

Malnutrition tends to result in murmurs.

Known congenital defects, Anomalies of 1. valves; 2. origin of great vessels; 3. chordae tendineae; 4. papillary muscles.

Mitral insufficiency murmur.

Examination

Examine lying down, then have the patient sit up and lie down several times quickly, finally examine with patient lying on left side to bring out the murmur. *Almost all systolic murmurs are exaggerated by exercise.* This technic doesn't prove the murmur is organic. The murmur of mitral insufficiency is harsh, high pitched and blowing, heard best at the apex and transmitted out into the axilla. It is heard best through the diaphram of a two piece stethoscope.

In the course of acute rheumatic fever, soft blowing systolic murmurs may appear which are heard over the entire

*Assistant Director, Rheumatic Fever Diagnostic Service, Colorado University Medical School, Denver, Colorado.

heart and also low pitched diastolic murmurs. These may completely disappear and are probably due to generalized slight dilatation of the heart. There is nothing characteristic about this type of systolic murmur.

Joint Pains: Differential Diagnosis

Rheumatic fever pains: 1. Worse in morning, not after exercise; 2. Patient is "stiff" on awakening in the morning; 3. Located all over body; if in leg muscles alone it is usually not rheumatic fever. Pain of rheumatic fever tends to migrate from one joint to another.

Common leg pains which are not rheumatic; 1. Wakes up crying one or two hours after going to sleep; 2. Points to calves of legs; 3. Relieved by rubbing; 4. Pains after exercise or walking are not due to rheumatic fever but may be due to: Exercise; Trauma; Calcium deficiency, or some other dietary deficiency. (B1, Thiamine deficiency may be one of these); Anxiety; Shoes—examine them to see if they are run over at heels, if new, if wearing brother's shoes, as all may result in leg pain.

5. Infection causes fleeting pain in joints (infected tonsils, or an acute upper respiratory infection may cause pains at once rather than after a symptomless period or phase II). Rheumatic pains usually appear *after a quiescent period*, and not in the course of an upper respiratory infection, scarlet fever, strep throat, and so on.

6. Exertion after convalescence; muscle and joint pains may appear on getting up. A streptococcic throat and long administration of sulfonamides may decrease the red cells and cause a transient anemia.

This may cause pallor and slightly elevated sedimentation rate, and rheumatic fever may be erroneously diagnosed.

Elevated Sedimentation Rate

In rheumatic fever the sedimentation rate goes up markedly and stays up for months; in an acute infection there is a sudden rise and fairly prompt fall, usually in about three weeks.

Anemia from many conditions causes an increased sedimentation rate.

Chronic infection (purulent sinusitis, infected tonsils, abscess at apex of tooth) causes sedimentation rate elevation. Carious teeth do not increase the rate. A full mouth x-ray may be needed to detect apical abscesses.

Obesity may cause a slightly elevated rate.

Menstruation—no definite relationship established.

Malnutrition—slight increase of rate.

Diagnostic Value

The sedimentation rate alone is never diagnostic, as it may be normally high in certain children. Also, rheumatic fever may be present without any elevation of rate, or right ventricular failure may cause a decrease in rate to normal.

Fever

Fever of unknown origin (99° to 100° F. in the evening). Two minutes is long enough to keep the thermometer in the mouth. If a thermometer is left in anyone's mouth for five to ten minutes, (as many mothers do) a thermometer reading of 99° F. or over will be found. This is not true fever.

Emotion, excitement, a physician's examination, cause a temperature rise to 100° F. in a thermolabile patient.

Menstruation—Two weeks before the onset of menstruation in the adolescent girl, a temperature of 99° to 100° F. may be present.

Medication—Be sure to ask about any medicine. If aspirin has been taken, no fever or joint pain will be present. Stop all treatment before evaluating rheumatic fever. Fever may result from injections of drugs, also chronic upper respiratory infections may cause fever.

Tachycardia

1. Rheumatic tachycardia—The pulse is fast, out of proportion to the fever and the character of the heart sounds may be altered.

2. Emotional—Have patient rest before evaluating the heart. This sifts out two-thirds of patients as the rate drops below 90.

3. Neurocirculatory asthenia.

4. Hyperthyroidism.

5. Acute infection causes tachycardia; chronic infection may cause tachycardia.

6. Other abnormal rates or rhythm: 1. Extrasystoles—occur normally but also

may occur in rheumatic carditis.
2. Paroxysmal tachycardia.

Nosebleeds (Epistaxis)

A careful history shows that most children have nosebleeds. Rheumatic epistaxis is:

1. Scanty at first. In severe rheumatic fever, it may be profuse enough to require packing.

2. No precipitating cause.

3. Wakens in the morning with blood stains on pillow.

4. Usually bilateral.

Other causes of nose bleed may be from:

1. Trauma, especially after exertion and in summer.

2. Familial—all have nosebleeds.

3. Infections—chronic nasal infection, adenoiditis, influenza.

4. Persons recently moving to high altitudes from sea level.

Other Considerations

Abdominal pain is common in all children, thus making it easy to build up a pseudorheumatic history; abdominal pain not related to meals may be of rheumatic origin. Diagnosis requires differential diagnosis of all conditions causing the acute abdomen. It is common in children with rheumatic fever but if surgical condition cannot be ruled out, operate.

Purposeless movements (tics, spasms, tremor):

1. One must evaluate for chorea. This is covered by another paper. (See Clin. Med., Jan.-Feb. issue, p. 9, 1946).

Borderline electrocardiograms:

1. Serial tracings are of great value.

2. P-R interval.

3. ST segments — elevated in lead, I, II, or III in pericarditis, T wave changes in rheumatic myocarditis.

4. Axis deviation—right axis deviation is normal in young children, and in tall thin children. Left axis deviation also occurs normally especially in very obese children.

Heart Enlarged—One cannot accept a clinical determination of size, in cases of slight enlargement.

1. The heart size is measured from the midline to the point of maximum impulse. If over ½ cm. beyond the mid-clavicular line, one may suspect cardiac enlargement.

2. *The smaller the child the more unreliable are the criteria for estimating heart size.* In small children the left ventricle may overlap the spinal column in the left anterior oblique position. In small, thin chests, the heart may appear enlarged. Children born prematurely may appear to have borderline hearts.

3. Unexplained cardiac enlargement (transverse diameter in the anteroposterior view), with no history and no other signs of heart disease.

Conditions That May Be Confused With Rheumatic Fever.

1. Upper respiratory infection.

2. Anemia, all types.

3. Fatigue. (May be due to lack of food or sleep).

4. Tuberculosis (should be thought of especially in colored children).

5. Rheumatoid arthritis.

6. Osteomyelitis—one can find a point of maximum tenderness over the epiphysis (in rheumatic fever the swelling and tenderness are general).

7. Goiter.

8. Influenza.

9. Poliomyelitis.

10. Serum sickness. Scarlet fever or other antitoxin causes pain and swelling of joints.

1. Drug reaction. A sulfonamide sensitive patient may experience polyarthritis.

12. Appendicitis.

13. Allergy.

14. Subacute bacterial endocarditis.

15. Gonorrheal arthritis. (may involve several joints in children).

16. Abdominal pain—allergy, constipation, appendicitis, may cause pain.

Less Common Diseases

1. Trichinosis.

2. Nephritis—casts can be found.

3. Acute gout.

4. Malaria.

5. Rickets.

6. Hemophilia.

7. Early leukemia without elevated white count.

8. Dematoses—erythema marginatum is typical of rheumatic fever.

9. Purpura — Henoch-Schonleins purpura with joint and abdominal pains.

10. Scurvy—in *very young* children, painful extremities are complained of; x-ray reveals elevation of the periosteum (by hemorrhage). Remember that rheumatic fever is uncommon in children under three years of age.

11. Pyelitis.

12. Syphilis.

13. Rocky Mountain Spotted Fever.

14. Parasites, such as hookworm, may cause abdominal pain, anemia, joint pain, enlarged heart with murmur.

15. Deficiency diseases.

16. Behavior problems.

17. Epiphysitis—Perthes disease, tuberculosis.

18. Infectious Mononucleosis—the heterophile antibody test may be used.

19. Meningitis, meningococcemia.

20. Periarteritis nodosa, dermatomyositis, scleroderma, disseminated lupus—these are little known, should be thought of as a last resort diagnostically. (Dr. Thomas covered all orthopedic conditions).

Discussion by Dr. T. Duckett Jones

Shoes are important as a cause of pain. Pain in the feet may however be the only sign of rheumatic fever. These people hobble around. Rheumatic fever may be localized to one joint.

In one-third of rheumatic fever patients, the preceding streptococcic infection was subclinical (unknown to the patient) so that phase I and II are not observed. Two sore throats may appear. The first, two weeks before the onset of rheumatic fever and the second, during the initial attack. The causative organisms may not be the same.

Scarlet fever: During the first week multiple joint pains and even joint swelling may be present, then disappear. This is not diagnostic of rheumatic fever. Pains and swelling occurring during the second or third week make one suspect rheumatic fever. Obesity causes increased sedimentation rate. This is difficult to interpret in patients who have gained weight.

Cyclic variations occur in sedimentation rates. This variation is not appreciated.

Tachycardia is unimportant unless the pulse rate is fast during sleep. Other signs are definite.

Neurocirculatory asthenia: These patients are incapable, under certain conditions, of performing the amount of work a stable person can; this tendency runs in families.

Fever: The physician should discount low grade "fevers." They are often due to keeping the thermometer in the mouth too long. We use rectal temperatures. If no rectal temperature over 100° F. throw away the thermometer and let the patient resume all activities.

Undulant Fever should be added to the list of differential diagnoses, as it is a common cause of joint pains in children. If a skin test is used, the agglutination test changes from negative to positive agglutination in high titer at the end of 10 days.

False positive Wasserman Tests occur in rheumatic fever.

WHAT ARE YOUR HOMES?

What have you in these houses? And what is it you guard with fastened doors?

Have you the peace, the quiet urge that reveals your power? Have you beauty, that leads the heart from things fashioned of wood and stone to the holy mountain? Have you remembrances, the glimmering arches that span the summits of the mind?

Or have you only comfort, and the lust for comfort, that stealthy thing that enters the house a guest, and then becomes a host, and then a master?—KAHLIL GIBRAN in "The Prophet."

Physician's Workshop

By KELCY KERN

IN a recent interview, Dr. A. Stanley Kaye of 751 Gerard Ave., New York City, said of his now famous home workshop, and his hobby of working in wood: "From an emotional point of view, it acts as a safety valve because it gives great release from tension. Working with wood makes one forget worries and cares, makes him a new person.

"Citing myself for example: many times when I get home from a long day of calls, or escape from an interminable line of patients at the office, I'm just tired out. Then, I trot down to my home workshop and, after adhering to all the prescribed safety precautions, 'work it out' on a piece of wood. After a few hours of working with my hands I come back feeling like a new man. This hobby is appealing to more and more doctors, or, for that matter, for any one who needs an emotional outlet, a mental rest, change."

Over half of all new postwar homes will be designed to have home workshops in them, according to architects, and this country is going to apply its skills learned in war plants, trade schools and school shops to the popular hobby of making things with tools and machinery. This hobby of working with tools and machinery on wood and plastics, for pleasure or for more practical returns, is appealing to more and more doctors, because most doctors are skillful with their hands and it gives practical relief from strenuous and high-tension days, long hours.

The doctor's woodworking shop can be small or large, depending upon his mechanical ambitions and his needs. (Might read "How to Plan A Home Workshop," Delta Craft Books, Inc., Milwaukee, Wis) The new wood and plastic working machinery is lighter, safer, faster and more versatile as well as being more easy to use with the help of thousands of plans and blueprints now available to the amateur.

A small beginning can be made. In machinery, in order of importance are the circular saw, drill press, grinder, lathe, scroll saw, shapers, disc or belt sander, band saw, etc.

As for hand tools, the doctor usually has some sort of start including such items as: C-clamps, hand drill, hacksaw, cut-off saw, nail set, jack plane, oil stone, screwdrivers, combination pliers, rip-saw, level, folding rule, set pocket chisels, ratchet brace, combination square, set auger bits, and nail hammer. (Stanley Shop and Tool Manual can give good ideas for useful additions).

The best place for the doctor's workshop is in an outbuilding. Part of the garage will do if it is roomy enough. Next best place is usually the basement.

The workshop should, of course, be day-lighted if possible. Otherwise, all available daylight should be well aided by proper artificial illumination. Power tools should be wired independently and the local electrical code should be investigated and adhered to.

A paint, varnish and lacquer spraying gun is a very helpful addition along with a booth. Spray painting is faster, smoother, and dries faster than by brush.

What the doctor makes in his workshop will depend much upon his needs and his inclinations. There are literally thousands of articles to make of plastics or wood, and simple plans to follow in order to make them.

Home care and repair problem will be largely solved, all members of the family can make things for pleasure, use, or profit, youngsters will be kept off the street and out of mischief, and in the case of the doctor he will have a hobby right at home where he is always easily and immediately available for a hurry call.

Intracranial Hemorrhage in the New Born*

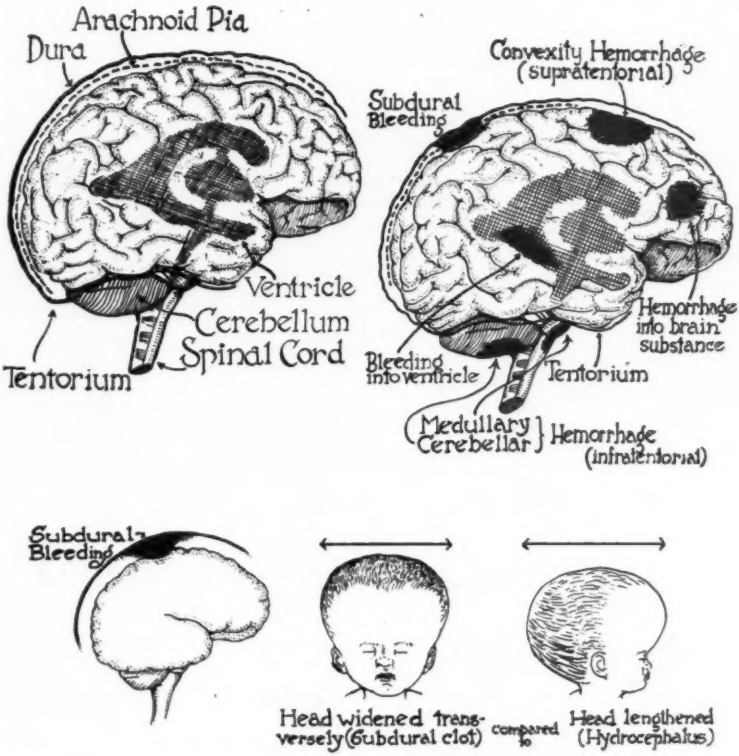
CONVULSIONS IN THE NEW BORN

THE newborn infant who has a number of indefinite or vague symptoms, may be overlooked in considering serious lesions.

One condition that may be readily misdiagnosed, or not diagnosed at all, is intracranial hemorrhage. The symptoms may be directly referable to the brain, such as convulsions, either localized, generalized, or petit mal, or they may seem to be related to the gastrointestinal system, including refusal to nurse properly or not to nurse at all, and repeated or intermittent vomiting.

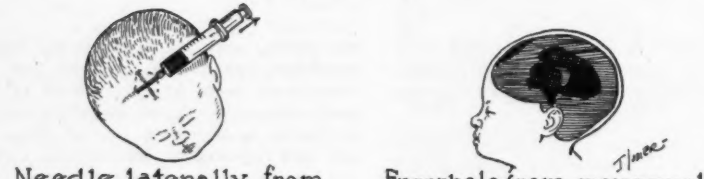
The new born baby who is crying, tense or nervous may have an intracranial hemorrahge. Such a baby may exhibit unusual lethargy, stupor or may

* Clinical Medicine Staff Article with original illustrations.

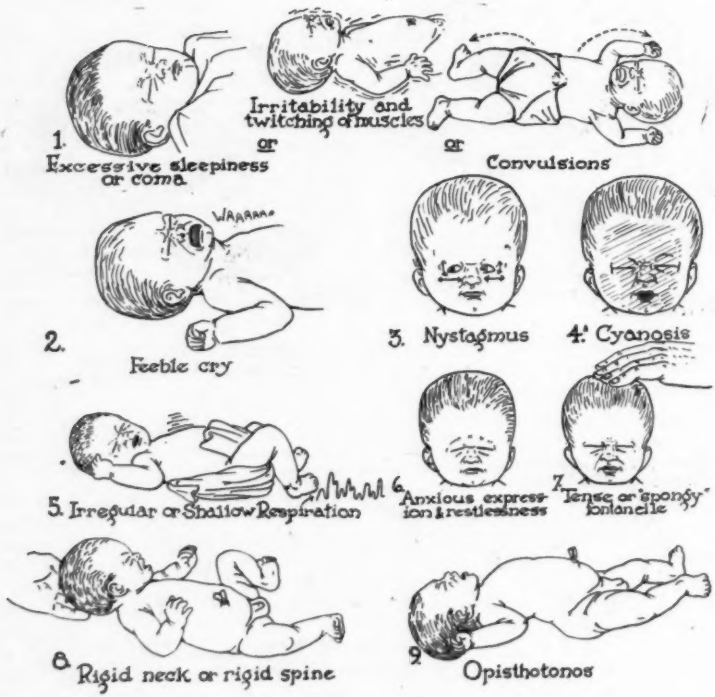


Anatomy of Brain and Membranes

Intracranial Hemorrhage in the New Born


Needle laterally from angles of fontanelle to find old blood.
Encephalogram may reveal dilated ventricles, cortical atrophy and possibly the clot shadow.

Technic of aspirating for old blood from the subdural spaces. Encephalogram taken following injection of air through a spinal puncture.



Nine signs that may indicate intracranial hemorrhages or injury.

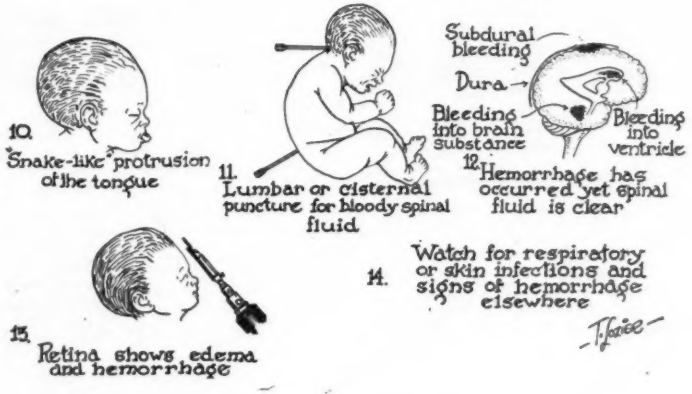
Intracranial Hemorrhage in the New Born

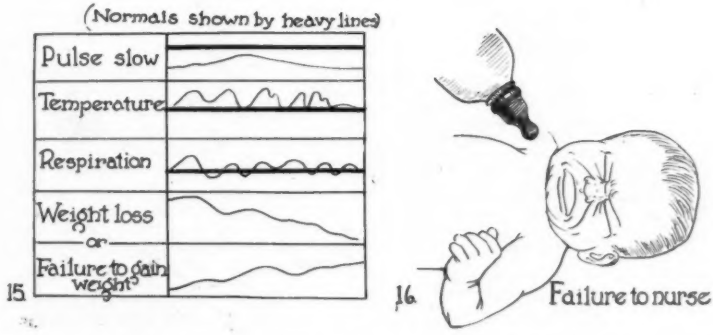
be hyper-irritable. The baby may not gain in a normal manner or may not gain at all.

Signs may be present, including increased reflexes, separated sutures of the skull and tense or bulging fontanelle, tonic neck reflexes or stiff neck, or rigidity of the whole spine, partial or complete paralysis, displacement of eye, hemorrhages into the retina, slow pulse, elevated or subnormal irregular temperatures.

On the illustrations making up this graduate course the artist has shown the various signs and symptoms of intracranial hemorrhage and also the various methods of treatment that may be used.

If a subdural hematoma is suspected, one may tap the subdural spaces by introducing a needle laterally from the anterior fontanelle as shown in the figure. The finding of blood or the products of hemolysis and a high protein



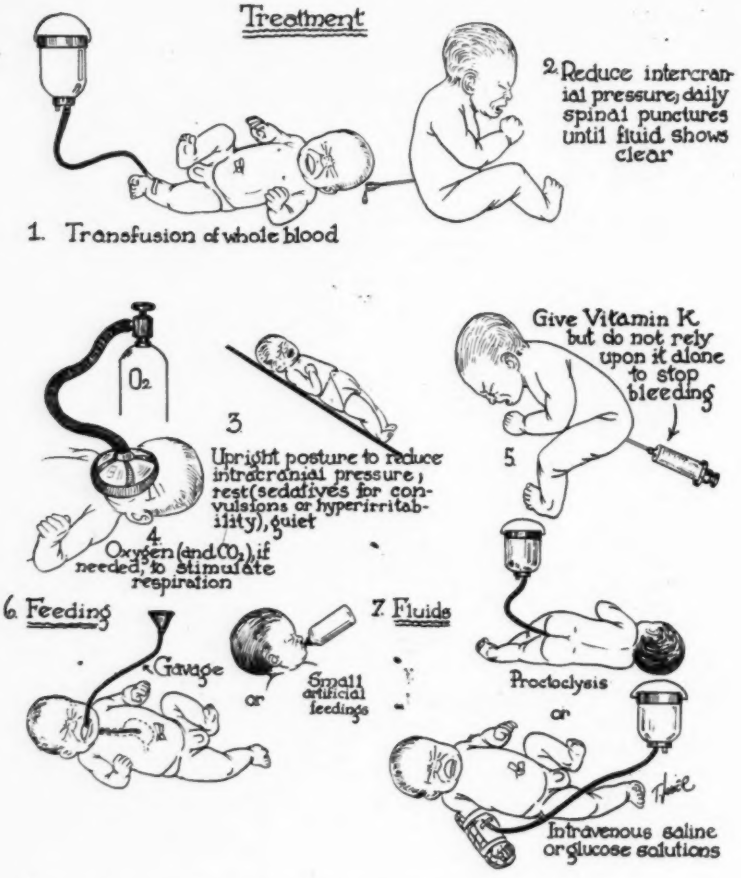


Seven additional signs that may indicate intracranial hemorrhage. Variables in weight, temperature, pulse and respiration due to intracranial injuries, and failure to nurse may be due to a brain injury or disease.

Intracranial Hemorrhage in the New Born

content of the fluid indicates that there is a blood clot lying beneath the dura. A spinal puncture is performed and, if the fluid is clear, it is the only puncture that is performed. X-ray evidence may be obtained by ventriculography or encephalography.

The presence of blood in the subdural fluid does not prove that the blood clot is due to injury. One must exclude purpura, leukemia, spontaneous hemorrhage, scurvy, syphilis, and infection. If these are ruled out, surgical treatment is indicated, involving the drilling of a bur hole and exploration for subdural clot. Late symptoms of a subdural hemorrhage consist of convulsions and a gradual enlargement of the head. The diagnosis should be made before this, if possible.


Treatment
2. Reduce intercranial pressure; daily spinal punctures until fluid shows clear
1. Transfusion of whole blood
O_2
3. Upright posture to reduce intracranial pressure; rest (sedatives for convulsions or hyperirritability), quiet
4. Oxygen (and CO_2) if needed, to stimulate respiration
Give Vitamin K but do not rely upon it alone to stop bleeding
5
6. Feeding
Gavage
or
Small artificial feedings
7. Fluids
Proctoclysis
or
Intravenous saline or glucose solutions

Seven different methods of treatment, including proper method of feeding are shown above.

The Role of the National Foundation for Infantile Paralysis

By ROLAND H. BERG,* New York, N. Y.

INFANTILE PARALYSIS is becoming increasingly important to the orthopedist, pediatrician and to the general practitioner. The years of 1940-1944 have produced a 53% increase in the case rate of the disease over the preceding years of 1935-1939. The marked rise in the reported incidence of the disease in the past two years (12,429 cases in 1943 and 19,268 in 1944) has emphasized the importance and value of the aids and services accruing to the medical and nursing professions, through the broad programs of the National Foundation for Infantile Paralysis, in the fields of research, education, epidemic aid, and medical care.

Research Program

Scientific study of a disease such as poliomyelitis, presents a multiplicity of problems in transmission, pathology, pathogenesis, symptomatology and therapeusis. Many investigations are concerned with basic inquiries into a number of neurotropic virus diseases. Information obtained from the study of St. Louis encephalitis, Eastern and Western equine encephalomyelitis and Japanese B encephalitis has provided and will continue to provide basic facts applicable to poliomyelitis.

The Foundation's purpose in aiding research is not to direct such investigations, but to coordinate and integrate these studies into a broad comprehensive plan. Old studies have been strengthened, new ones projected under the guidance of advisory committees composed of outstanding men in the field of medicine and science. Applications for grants in research are reviewed by the advisory committees which pass upon the value of the project, qualifications of the worker, and facilities of the institution where the proposed investigation is to be carried out. In addition to the actual financial support given to the grantee, every other resource of the National Foundation is placed at his disposal. Pre-planning and consultation, procurement of laboratory animals and equipment, exchange of information with other grantees, are available to the grantee if desired.

Educational Program

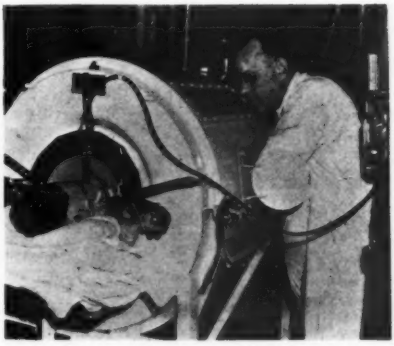
Research in poliomyelitis has encountered many barriers. One of the most serious drawbacks has been the inadequate number of trained workers capable of conducting programs of study. To meet this need of skilled personnel, the National Foundation has made available scholarships and fellowships offering training in virology, orthopedic surgery and public health.

There is an ever growing need for physical therapists in the treatment of poliomyelitis and also for many other diseases, injuries and disabilities. Grants have been made to approved training centers providing scholarships and fellowships to doctors, nurses and other qualified persons for this training.

As additional facts are uncovered in the field of poliomyelitis, it is necessary to provide wide-spread dissemination of this information to the medical and nursing professions and the general public. The National Foundation has printed and given wide distribution to numerous publications which are constantly revised so as to provide the most advanced knowledge of poliomyelitis.

Epidemic Aid to Communities

There is no scientific method to determine where, when and how severely an epidemic of infantile paralysis will



Admitted to the Emergency Polio Hospital at Hickory, North Carolina, with the double involvement of bulbar polio and pneumonia of the left lung, this patient is progressing nicely under the care of Dr. Harley E. Henry, in charge of Ward No. 1.

Respirators, medical and nursing care, and funds to operate the emergency hospital were provided by The National Foundation for Infantile Paralysis and its North Carolina Chapters.

*Medical Department of the National Foundation for Infantile Paralysis.

strike. It is not possible to furnish each community with the personnel and equipment necessary to combat effectively an epidemic. Preparations for epidemics must be started long before the actual outbreak takes place. At the request of local health authorities, the National Foundation is always ready to come into any area and consult with the local officers of agencies responsible for the health of the community. Through such cooperative action and planning, the community's resources to meet epidemics of infantile paralysis can be surveyed and preparations to fill in the obvious gaps can be intelligently projected.

Despite well-planned preparedness programs it often becomes necessary, under the stress of a severe epidemic, for a community to seek outside help. The National Foundation has set up an epidemic aid fund of $2,000,000 for the purpose of extending help to those communities whose financial resources have dwindled because of severe outbreaks. Apart from the actual financial help given to communities on request, the National Foundation provides valuable service in procuring special equipment and skilled personnel such as epidemiologists, nurses and physical therapists to assist the health authorities of epidemic areas.

Medical Care Program

The National Foundation is supported entirely by contributions of the American public through the "March of Dimes." Half of the money collected remains in the community where it was raised for the administration of local medical care programs, while the other half goes to national headquarters to finance research, education and epidemic aid. One of the fundamental purposes of the National Foundation is to insure adequate medical treatment for all needy victims of infantile paralysis, regardless of age, race, creed or color. To fulfill its obligations in this respect, local chapters have been formed throughout the United States in all of the country's 3,070 counties, whose task is to make certain that equipment, personnel and funds to pay for these services are avilable for all who require it. The medical care program of these chapters is carried on, not by supplanting local health agencies, but by cooperating with and supplementing the work of such groups. Neither the National Foundation nor its chapters maintains a hospital, clinic or treatment center of its own. Nor does it dictate the type of treatment a patient receives. That is entirely at the discretion of the physician of his own choosing. The Chapter acts as a clearing house for all information as to available medical and hospital facilities for the care of the poliomyelitic patient. The cost of such hospitalization and medical care is borne by the local chapter when the patient's financial status requires it and as needed, will pay for service that will insure as full recovery as possible.

An instructor in physical therapy demonstrates to a student the correct technic of applying galvanic stimulation to affected facial muscles. This is one of the many forms of physical therapy included in the intensive nine months training course for physical therapists.

The National Foundation makes every effort to obtain professional personnel such as physical therapists and nurses upon request of local medical authorities; publishes a registry of respirators and in addition maintains a pool of twenty-six machines which are loaned to areas upon request.

The Physicians

The local chapters are urged to maintain the closest relationship with the medical societies and groups of their communities and have representative members of the medical and nursing professions on their advisory boards. There is need of a continued cooperation with the members of the medical profession so that individual physicians will know that there is a National Foundation for Infantile Paralysis whose interest primarily is in seeing to it that all victims of infantile paralysis receive adequate medical care. The manifold benefits both to the physician and patients will not be fully realized until such intimacy is established and these comprehensive objectives cannot be attained without the closest cooperation and support of the medical profession.

120 Broadway.

EDITORIALS

"Refugee Physicians" II

The editorial discussing refugee physicians (CLIN. MED. Mar. 1946) has stirred up a very interesting controversy. A few letters have been received from physicians, who are newly located in the United States, expressing strong dissatisfaction with the material presented.

These physicians have been written to immediately and the statement has been made that if there were any facts misrepresented or incorrectly stated in the original editorial, a retraction of such misstatement will be made at once, or that if the physicians wish, a statement concerning their views on the disagreement will be published within reasonable limits.

In regard to the statement that these physicians do not locate in areas that are without doctors, it was noted that the letters received indicate that the physicians concerned have located either in Chicago or New York, rather than in smaller cities in the middle west and west where there have been no physicians at all and persons who are sick or injured must drive from forty to sixty miles to the nearest physician.

It should be clearly understood that neither *Clinical Medicine* nor its Editor has anything against refugee physicians, nor are we trying to stir up hatred or distrust between native and foreign born physicians. If there be any such feeling such as this already, the editorial has merely served to bring the topic into the light of open discussion.

One letter stated that the editorial was "Undemocratic." This is a bit peculiar, as we have always had the impression that in a democracy, the method of "open discussion" (saying what one thinks) is the method of choice, in any controversy. Are the U.N.O. discussions, now in progress, undemocratic?

We would be glad to publish letters from physicians interested in this topic, both pro and con, with the hope that it will lead to better relations for all concerned. If any of the refugee physicians wish to know of areas where the need for physicians is still very great, CLINICAL MEDICINE will do all in its power to find the locations where they can have the satisfaction of serving people who are in tremendous need of medical care.

"Free Choice of Physician"

When the average layman wishes to consult a physician, his choice is based on all the "scientific" evidence shown in quotations on this editorial cartoon. Even professional persons choose their physician on hearsay.

An unfortunate result is that there is often a pressure on the physician to act as he thinks his patients want him to. Instead of enjoying life, giving his patients thorough attention, and studying, he rushes around, tries to keep his office filled, rarely admits that he has a free moment. He may not take time to obtain an accurate history or perform a thoroughly worthwhile examination and therefore rapidly loses diagnostic ability. All, so that friends and patients can say admiringly, "He's always busy."

CLINICAL NOTES AND ABSTRACTS

Problems in the Diagnosis of Bronchial Asthma

Practically all lung diseases and some extrapulmonary thoracic conditions may be accompanied by wheezing and thus may camouflage the clinical picture of bronchial asthma. A few points concerning the physical examination are of diagnostic importance:

1. If wheezing is localized in a certain area instead of being equally distributed throughout the lungs, one should be on the lookout for a non-allergic process.

2. The presence of rales is indicative of some disease other than allergic asthma or some of its complications. usually pneumonitis and bronchiectasis.

3. An asthmatic who can lie down should be suspected of having some disease other than allergic asthma.

Among diseases occurring coincidentally with asthma, tuberculosis is given special consideration. Four possibilities for differential diagnosis:

1. Asthma-like wheezing is encountered during the course of tuberculosis and is easily confused with asthma. Mucus in the bronchial tree and the partial obstruction of bronchi by tuberculous scar tissue may account for the wheezing. 2. Allergic asthma may become complicated by tuberculosis. 3. A tuberculous patient may develop true allergic asthma. 4. Asthmatics with healed tuberculosis may exhibit strong skin reactions to tuberculin. In these cases, treatment with tuberculin in very small doses is likely to relieve the allergic asthma.

Both thyroid and heart disease may be associated with asthma and either aggravate existing symptoms or simulate asthmatic attacks. In neither case is there any etiological relationship. There is no clear evidence at present that heart disease results from continual attacks of asthma.

The common complications of allergic asthma are sinus disease, pneumoniti and bronchiectasis. Such features as th presence of eosinophil cells in the nasal mucus and the occasional findings of pus, and cloudiness in the sinuses on transillumination or on x-ray evidence, are not sufficient to determine whether we are dealing with infections or allergic sinus disease. This should be thoroughly appraised in the light of the clinical background of the case. Similarly, a differentiation between waterlogged, edematous, hyperplastic tonsils due to allergy and primarily infectious tonsillitis should be made. In the latter case the tonsils should be removed, while the operation on allergic tonsils increases the allergic state.

Four modes of origin of pneumonia in the asthmatic patient: 1. The first is the usual infection induced by the common organisms of the disease. 2. Another type of pneumonitis is frequently encountered in asthma of short duration. It is considered an allergic edema which becomes infiltrated with leukocytes after several hours, and assumes the clinical picture of low-grade pneumonia. It is due to sensitization. 3. Pneumonitis may result from partial obstruction of small bronchi by mucus, followed by atelectasis. Such atelectatic areas become subsequently infected and appear clinically as pneumonitis. In such cases, bronchoscopic aspirations of the mucus may be very effective. 4. "Loeffler's syndrome," a pneumonia-like infiltration of lung tissue associated with

marked leukocytosis and high eosinphilia is encountered in asthmatics. The lesions are transient, occurring in various parts of the lungs at different times. —GEORGE L. WALDBOTT, M.D., in *Ann. Allergy.*, Jan. 1945.

Sudden Spontaneous Paralysis

The sudden appearance of flaccid paralysis may be due to a respiratory or other infection. If it occurs following a spinal anesthetic or an operation, the anesthetist or surgeon may be blamed.

Known as the Guillain-Barre syndrome, it is characterized by (1) normal temperature, (2) severe flaccid paralysis without muscle atrophy, (3) tendency toward complete recovery despite profound symptoms, (4) low cell count in spinal fluid with large amounts of albumin, (5) practically normal white cell count.

Treatment: No specific therapy; same type of treatment as in poliomyelitis plus vitamin B, in large doses.—A. C. HOPE, M.D., in *Southern M. & S.*, June 1945.

How Common is Nutritional Deficiency?

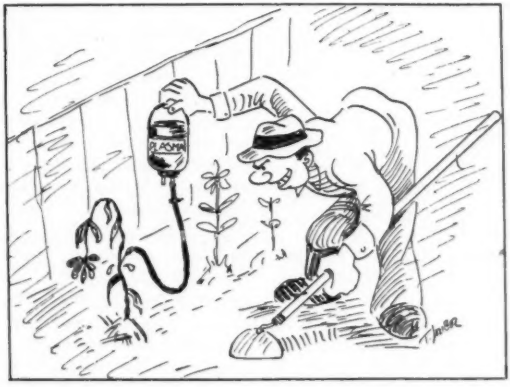
Wild statements, such as "Thirty percent of the population of the United States are malnourished," have led to the impression on the part of the public and medical profession that "hidden hunger" is tremendously common.

Objective studies are now beginning to appear which make us wonder if nutritional deficiency has not been oversold. The changes which are believed to result from lack of certain vitamins or proteins are found to be very rare, even in sections of the country not noted either for prosperity or a balanced diet.

Darby and Milam in *Am. J. Pub. Health*, Oct., 1945, reported the study of a group of rural inhabitants of North Carolina, with complete medical and dietary history, physical, and laboratory examination including biochemical studies of vitamins A and C, red cell count, hemoglobin and plasma protein.

Their conclusions: "The most prevalent definite abnormalities attributable to malnutrition are *obesity, underweight* and *low hemoglobin concentrations of* the blood, especially in women and children." It must not be forgotten that overweight is an evidence of poor nourishment, because such individuals usually have a poorly balanced diet, high in calories.

Symptoms precede signs in many fields of medicine, and this is also apparently true of nutritional deficiencies. The average office or clinic patient cannot be expected to exhibit the signs stated in the literature (vascularization of the cornea, circumcorneal injection, angular fissures of mouth, tongue-mouth changes, and skin changes, due to riboflavin deficiency; skin and conjunctival changes due to vitamin A lack; gingivitis due to vitamin C lack; neurologic



changes due to B_1 deficiency; gross tongue and skin changes, due to nicotinic acid deficiency; and minimal edema due to low protein dietary).

In the course of abnormal diets, as in the case of surgical and medical patients, or disease of the gastrointestinal tract, nutritional deficiency can rise rather readily.

New Itch Remedy

A new itch remedy, Circa 42, developed by scientists of the U.S. Department of Agriculture's Research Administration, relieves skin irritations caused by bites or stings of insects, such as chiggers, mosquitoes, spiders, wasps, and others, or fungus infections, poison ivy, and "unknown" causes. Limited tests on persons in this country and in tropical areas have indicated Circa 42 to be a promising remedy for relief of itching skin for all but a few of those who have tried it.

Apparently, Circa 42 is not a universal remedy. A small percentage of persons do not respond and it does not relieve itching skin under all conditions. According to results reported so far, duration of relief from one application varies with individuals. Most of those who have used Circa 42 have had relief for five to eight hours or more. For over a third of those tested, relief was permanent.

This remedy can be prepared by any druggist, who has the ingrediets, from the formula. (Dr. J. Franklin Yeager, Agriculture's Research Center, Beltsville, Md.) Circa 42 is a doughy nongreasy cakelike material, which is applied by hand in a thick layer over the itching regions, but not rubbed in. It is made of five materials, two of which produce a local skin anesthesia, without harm to the skin.

The formula for Circa 42 is as follows:

n-butyl-p-aminobenzoate	.100 gm.
benzyl alcohol	.170 cc.
anhydrous lanolin (melted)	20 cc.
cornstarch	.640 gm.
sodium lauryl sulfonate	64 gm.

More benzyl alchohol is added in mixing the other ingredients, according to the following directions provided by Yeager and Wilson.

1. Warm the benzyl alcohol, and dissolve it in the n-butyl-p-aminobenzoate making an approximately saturated solution.
2. Add melted lanolin, keeping the mixture warm and stirred until as much of the lanolin as will dissolve is in solution.
3. Mix well the corstarch and sodium lauryl sulfonate, and add slowly to this powder, a little at a time, the warm liquid prepared in step 2. Knead this mixture to distribute the liquid evenly through the powder.
4. Add benzyl alcohol—about a tenth of that already used—to produce a doughy, non-greasy, cakelike ointment that can be packed in ointment jars or other suitable containers. It is better not to use containers made of metal.

Sulfonamides in Pregnancy

The sulfonamides may be prescribed in full therapeutic dose during pregnancy. These drugs pass from the maternal to the fetal blood and there is always a possibility of toxic effects in carrying the fetus. Opinion is not in favor of prolonged administration of these drugs during pregnancy whether large or small doses. —B. M. Bharadwaj, *Medical World.* (Eng.) November 2, 1945.

Overlooked Stomach Tumors

Tumors of the cardiac end of the stomach are often overlooked. Preliminary fluoroscopic examinations of the gas bubble of the unfilled stomach will often show irregularities of the bubble or a mass projecting into the bubble.

As the first swallow of barium is taken, the fluoroscope should be directed at the esophageal entry into the cardiac end of the stomach. Small malignant lesions in the cardia will often cause a splitting or deviation of the barium stream. A malignancy of the esophagus results in delayed emptying or a continuous stream.

After the patient has had one or two swallows of barium, he is lowered into the Trendelenburg position and the outlines of the cardiac end of the stomach noted. The patient is rotated in each oblique, and possibly in the prone position.

He is then returned to the erect position; the mucosa of the cardiac end of the stomach will be coated with barium; the air bubble offers a double contrast, and good spot films may be taken.

If the lower esophagus and cardiac end of the stomach move as a single mass, infiltration with a scirrhous carcinoma may be strongly suspected. The widening of the space between the diaphragm and the gas bubble may be the first indication of a cancer. Most cardiac tumors are malignant.

Lesions in the prepyloric area are frequently malignant. There are no definite criteria for separating malignant and benign lesions here. If prompt healing does not take place, a surgeon should explore the stomach.—L. M. GARRETT, M.D. in *Hawaii M. J.*, July-Aug. 1945.

Complications of Pneumonia

Complications of pneumonia can affect any organ or system in the body.

Skin: Herpes labialis, toxic rashes, rash due to profuse perspiration, purpura, metastatic abscesses, skin rashes from sulfonamides, urticaria from penicillin, serum or sulfonamides.

Gastro-intestinal: Nausea, vomiting, anorexia, acute gastric dilatation, parotitis, distention and paralytic ileus, pneumococic peritonitis (proven by aspiration and smear of exudate), jaundice (indicating severe toxic infection, or bacterial or virus invasion of liver) which calls for a low-fat, high carbohydrate and high protein diet plus amino-acids, insulin and vitamins.

Genito-urinary: Cystitis, pyelitis or pyelonephritis, nephritis (rare), orchitis, anuria with hematuria usually due to sulfonamide drugs or incompatible blood transfusion.

Central nervous system: Delirium, mania, great psychomotor activity, unconsciousness, stupor, delirium tremens, meningismus or meningitis (confirmed by spinal puncture and examination of smear), encephalitis, pneumococcic brain abscess following from extension of otitis or sinusitis due to pneumococcus, and peripheral neuritis.

Cardiovascular: Fibrinous or exudative pericarditis, myocarditis (due to infection or to sulfonamides), endocarditis either bacterial or rheumatic, congestive heart failure or circulatory collapse (with different signs and different therapy), auricular fibrillation, phlebitis or arteritis.

Respiratory: Sinusitis, otitis media, pharyngitis, laryngitis, asthmatic attacks and bronchitis which persist after the pneumonia is over, bronchiectasis, lung abscess or gangrene if infection is severe, unresolved pneumonia (rare—most such apparent cases finally are found to be empyema, encapsulated effusion, bronchiectasis, atelectasis, bronchial obstruction with suppuration, tumors of the lung, tuberculosis or even foreign bodies), atelectasis, thromboses of arterioles, hemoptysis and emphysema.

Almost all pneumonic processes have an associated pleuritis either exudative or fibrinous which may be followed by empyema (empyema is to be treated with penicillin injections into the pleural cairty and sulfonamides and penicillin orally; surgical drainage if necessary); the empyema may rupture into the lung resulting in a pleural-broncho-fistula, or air may be present (pyopneumothorax), spontaneous pneumothorax, mediastinitis and mediastinal empyema.—JOHN F. BRIGGS, M.D. (St. Paul, Minn.) in *Minnesota Med.*, Nov. 1945.

Crying of Newborn Infants

Crying has been a universal phenomenon among newly born infants for longer than human history, but it is surprising how little accurate information on the subject is available. Observations were conducted in a nursery for newly born babies for a period of 30 days, during which 4 observers took turns during each 24 hour cycle. For the whole day the average total of time spent in crying for each baby amounted to almost 2 whole hours. The crying bore a reciprocal relationship to the nursing care received. This is not an unfavorable criticism of an excellent hospital service. Nevertheless, one would question the nursing care of adults in a hospital where the average adult patient had to ring the service bell for two hours every day.

Crying of newly born babies is a re-

flex act in response to definite stimuli. Babies can not think or choose, and therefore their cries can not be labeled good or bad, except as applied to the care they get. Management which reduces crying to a minimum might be called good and that which produces a maximal response might be called bad. Pediatric and obstetrical routines in the nursery for newly born infants and on the obstetrical floor should be intelligently synchronized, in a manner which will take into account the needs of the babies.—C. A. ALDRICH, M.D. et al in *Jour. Pediatrics*, April. 1945.

Edema of the Prepuce

For a swollen prepuce caused by venereal disease: Zinc-peroxide is sprinkled under the prepuce on the glans, by rubber tubing attached to a powder blower. The secretion moistens the powder. The patient is *instructed not to wash* and to return in two or three days for another treatment.—*Medical World*, (Eng.) November 2, 1945.

Vaginal Discharge in Girls

A clear, mucous vaginal discharge occurs in hypothyroidism. Purulent discharge may be caused by foreign bodies, infections from streptococci, staphylococci, pneumococci, colon bacilli and most commonly the gonococcus. Gonorreal vulvovaginitis responds to penicillin, sulfathiazole or stilbestrol in orange juice.—B. B. WEINSTEIN, M.D. in *New Orleans M. & S. J.*, June 1945.

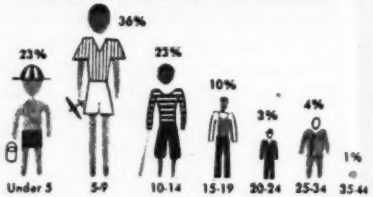
Frolich's Syndrome

A true Frölich's syndrome is due to a lesion of the hypothalamus. It is a very rare syndrome. It should not be confused with the numerous cases of obese adolescents manifesting some degree of hypogonadism —ARTHUR GROLLMANN, M.D. in "*Essentials of Endocrinology*" (Lippincott).

(It has been shown that most of the "fat-boy" or Fröhlich syndrome actually are obese boys who overeat and who are not lacking in normal genital development. The penis appears small because the suprapubic fat pad covers part of it, but if actually measured, it is of normal length for the age. These boys overeat, often because of some emotional conflict or unhappiness.—Ed.)

INFANTILE PARALYSIS

WHO IS AFFECTED, HOW AND WHEN

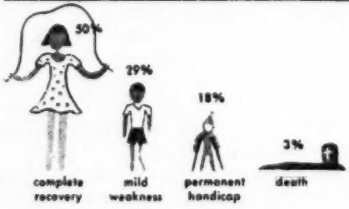


BY AGE

More than four fifths of the victims are under 15.

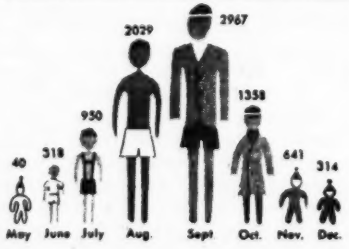
BY SEX

More of the cases are among males—reason unknown.



RESULTS OF INFECTION

Proper care of victims helps restore functions of weakened muscles, reduces the need for crutches and braces.



SEASONAL PATTERN (seven-year average)

Unlike other virus-borne diseases, polio strikes in summer. Cases between January-May are comparatively few.

(Charts by Look Magazine from figures compiled by National Foundation for Infantile Paralysis)

Threadworms (Pinworms)

A simple method of finding threadworms is to fold a piece of Scotch tape (transparent adhesive tape) about the length of a glass slide, over one end of a wooden tongue blade or spatula, with the non-adhesive surface of the tape against the wood. The ends of the tape are held by the examiner's fingers. Using this as an applicator and applying it to the peri-anal folds, the pinworm eggs are picked up by the sticky surface of the tape, which is then moved from the spatula and spread out, adhesive surface down, on the slide and examined directly under the low power of the microscope without the use of a coverslip. The slides may be kept for many days, without any change in the appearance of the ova.

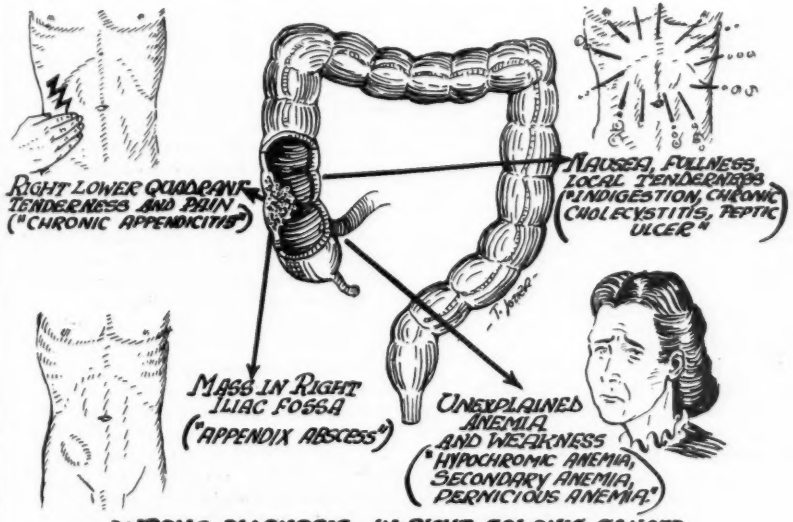
Artefacts and air bubbles may be mistaken for ova on casual examination but may be readily differentiated by examination with the high-power lens.

In order to obviate air bubbles and to get a clearer picture, I have found it useful to dip a match in cedar-wood oil and run it along the length of the slide to form a track about ⅛ inch wide. The tape is then gently spread on the slide as a cover slip.—I. MIRVISH. M.D. in *Proceedings Cape Town Med. A.*, May, 1945.

Common Mistake in General Practice
(Wrong Diagnosis in Right Colonic Cancer)

The major signs of this neoplasm are printed at the ends of the arrows; wrong "diagnoses" are in bracketed quotation marks.

(Note: Common Mistakes in General Practice, CLIN. MED. *April, 1946, p. 95, dealt with "Wrong Diagnosis in Left Colonic Cancer" but was not so indicated.—Ed.)*


RIGHT LOWER QUADRANT TENDERNESS AND PAIN ("CHRONIC APPENDICITIS")
NAUSEA, FULLNESS, LOCAL TENDERNESS ("INDIGESTION, CHRONIC CHOLECYSTITIS, PEPTIC ULCER")
MASS IN RIGHT ILIAC FOSSA ("APPENDIX ABSCESS")
UNEXPLAINED ANEMIA AND WEAKNESS ("HYPOCHROMIC ANEMIA, SECONDARY ANEMIA, PERNICIOUS ANEMIA")

WRONG DIAGNOSIS IN RIGHT COLONIC CANCER
(BASED ON RANKIN'S STUDIES)
THE TRUE SIGNS OF THIS NEOPLASM ARE GIVEN AT THE END OF EACH ARROW; "DIAGNOSES" MADE BY SUPERFICIAL OBSERVERS ARE IN QUOTATION MARKS

Cyanosis Due to Artificial Feeding

A problem of importance to physicians practicing in farm areas has been described by Dr. H. H. Comly of Iowa City (*J.A.M.A.*, Sept. 8, 1945). With infants suffering from gastrointestinal disturbances, alarming cyanosis may become manifest if the home water supply is a defective farmyard well containing nitrates derived from contaminated surface water. Within the colon, the bacteria convert these nitrates into nitrites, which then become absorbed. Nitrites act on hemoglobin to form methemoglobin, and methemoglobinemia produces cyanosis. In acutely cyanotic cases, methylene blue intravenously, 1 to 2 mg. for each kilogram of body weight, will relieve the cyanosis and distress instantly.

Water high in nitrates comes from wells which are old, dug rather than drilled, poorly covered, inadequately cased, and situated close to a barnyard or privy. Brief boiling of such water does not destroy the nitrates completely, though the content becomes decreased a little if the heat treatment continues for 20 minutes or more.

Artificial feeding is fraught with potential danger for the farm baby, whenever the water supply is unsanitary. Formulas made from dried milk are the most dangerous, feedings prepared from diluted evaporated milk are more safe, whereas those made of undiluted whole milk are much to be preferred. Breast feeding should be encouraged whenever possible.

The lesson from this is obvious—no baby should be given water in bottle or formula which is not clean and drinkable prior to its being boiled.

Test for Malaria

Malaria is a great imitator and will have to be included with greater frequency in the differential diagnosis of many diseases. A negative blood smear for malaria from a patient who has had or is exposed to malaria does not rule out the existence of malaria. We have had at least a dozen patients presenting chronic headaches and in whose blood we have repeatedly failed to find the Plasmodium. In these patients, the administration of quinine sulphate 15 grains or adrenalin 0.3 cc subcutaneously invariably resulted in the appearance of the malaria parasites. A blood smear taken during the interval clinched the diagnosis. —A. KAPLAN, M.C., U.S.N.R. in *J.A.M.A.*, Oct. 27, 1945.

Persistent Liver Damage Following Catarrhal Jaundice in Childhood

Sixteen children recovering from acute catarrhal jaundice were followed by means of liver function tests. Liver damage often lasted from a few weeks to several months following apparent clinical recovery, as evidenced by positive cephalin-cholesterol flocculation tests and persistent lowering of the serum diastase. — G. W. SALMON and E. E. RICHMAN in *J. Pediat.* (June) 1945.

Problem of Overaged Bachelors

The elderly bachelor is apt to be a neurotic who manages to maintain a certain amount of neurotic equilibrium as long as he does not marry. His aversion to marriage is a sympton of his neurosis, and at the same time a means of protecting him against the full bloom of his latent neurosis. The critical age in which this protective mechanism of protracted bachelorhood typically collapses is in the forties or early fifties. He then marries because his neurosis increases, not because he wants at last to do the normal thing. One gets the impression that the forties remind a person that his youth is ending and his neurosis asks for a holiday in the form of exaggeration. The unhappy marriage achieved by such an individual is often accompanied by potency disturbances, the result of the collapse of his self-protective device. Such a man can be helped analytically, but only on the relatively rare condition that he understand that his neurosis is to be blamed for his difficulties, not his age with its habits of long standing. The majority of these sick people simply divorce their wives, or retreat from marriage at the last moment and continue to enjoy their premarital neurosis.—EDMUND BERGLER New York, in *Med. Record*, May 1945.

DIAGNOSTIC POINTERS

Hypothyroidism and Cholecystitis

Gall stones and hypothyroidism have much in common:

1. High blood cholesterol levels
2. Overweight
3. Low basal metabolic rate
4. Common in middle aged women

Thyroidectomy, on experimental animals, results in poor emptying of the gall bladder and stone formation.—SIMENDINGER, M.D. E. A. *Surg. Gynec. & Obs.*, July 1944.

(The administration of thyroid extract in small doses (1 or 2 grains) daily to patients who have physical or laboratory evidences of hypothyroidism might prevent gall stone formation.

Chronic cholecystitis should be treated with thyroid extract, if no stones are present.—Ed.)

Psychoneurosis vs. Hypoparathyroidism

Hypoparathyroidism may simulate psychoneurosis or other psychosomatic disorder. Biochemical studies have greatly facilitated its diagnosis.—A. GROLLMANN, M.D. in "Essentials of Endocrinology" (Lippincott).

"Fatigue" Epilepsy

Occasionally, epilepsy only appears when the patient is very tired. Apparently this is a latent form of epilepsy; it does not require the usual therapy. Rest prevents such attacks.—MAX WEINBERG, M.D. in *J. Nerv. & Ment. Dis*, Aug. 1945.

Anginal Pain and Aortitis

The presence of anginal pain in luetic aortitis or aortic insufficiency is a very bad prognostic sign, death usually occurring in six months. — L. M. SALES, M.D., in *J. Indiana M. A.*, Sept. 1945.

Preventing Postoperative Lesions

It is impossible to rinse all the talcum from surgical gloves. Talcum causes irritation with later adhesion and granuloma formation, in the abdominal and cranial cavities. Clinically it may resemble malignant disease or tuberculosis, and may be difficult to distinguish microscopically from tuberculosis. Potassium bitartrate (cream of tartar) or special starch powder are not harmful.—*J.A.M.A* (page 309). Sept. 22, 1945.

The Pineal Gland

All available evidence indicates that the pineal gland is a vestigial organ which has no known function in the higher mammal. The view that the gland exerts an inhibitory effect on sexual maturation is without clinical or experimental evidence.—A. GROLLMANN, M.D. in "Essentials of Endocrinology" (Lippincott).

Renal Pain

Renal pain may be present on the opposite (contralateral) side of the body. *Both* kidneys should be studied, to make sure that typical renal pain on one side is not caused by a lesion of the opposite kidney or ureter. — S. SCHER, M.D. in *Proc. Cape Town* MA.., May 1945.

Nephrolithiasis and Hyperparathyroidism

Every patient with a history of recurrent or bilateral nephrolithiasis should be carefully examined for evidence of hyperparathyroidism, due to a small parathyroid adeoma. No bone lesions may be present; unexplained anemia may appear. — A. GROLLMANN, M.D. in "Essenials of Endocrinology" (Lippincott).

THUMBNAIL THERAPEUTICS

Abscesses Following Immunization

The greatest factor in abscess formation is the intracutaneous injection of alum precipitated vaccine. The physician or nurse after aspirating the vaccine into a syringe, forces out the air and in so doing, covers the outside of the needle with vaccine which is left in the skin after the injection.

Prevention: use a separate needle for injection, or leave one needle in the vaccine bottle to transfer the material and attach a separate, dry sterile needle for each inoculation. — W. SAKE, M.D., in *J. A. M. A.*, Feb. 17, 1945.

(Why expel air from the syringe? This is an old custom dating back to the days when everyone was sure that air embolism would result if 1/10 cc. of air was injected. Now we know that small quantities of air can be injected intravenously without harm.—Ed.)

Fibrin for Wounds

Fibrin may be used to "glue" lacerated wounds together painlessly. Plasma is applied to the surfaces of the wound and then thrombin is run or sprayed over them. The wound surfaces are held together for three minutes, without allowing motion. Then the wound may be supported by strips of adhesive tape.—FORREST YOUNG, M. D., Assoc. Prof. Surgery, University of Rochester School of Medicine, Rochester, N. Y.

Hiccough

Hiccough is controlled by injecting the fourth cervical nerve at the transverse process, with procaine (novocain solution). — M. CASPER, M.D., in *Kentucky M. J.*, Sept. 1944.

(A simple method available anywhere is bilateral pressure in the supraorbital notch. Each thumb is placed under the patient's orbital ridge, at the inner angle, and firm pressure made upward. —Superintendent Fraser, Buffalo General Hospital, Buffalo N.Y., demonstrated this technic.—Ed.)

Penicillin for Boils

Penicillin is a valuable therapeutic agent in the local treatment of boils, abscesses and other superficial pyogenic infections of the skin. It may be used as a solution of crude penicillin, penicilium gauze or purified penicillin in ointment base.— H. J. TEMPLETON, M.D., in *Arch. Dermatol. & Syphil.*, March 1945.

Ivy Poisoning

Plunge the hands, or other affected parts, under scalding hot water intermittently a dozen times. Repeat this later, as pruritis recurs. The ivy poisoning will dry up in a day or two.—Francis E. PARK, M.D., in *J.A.M.A.*

Treatment of Headache

Perennial vasomotor rhinitis, vasodilating pain headaches, myalgia and Meniere's syndrome (Endolymphatic hydrops) can be relieved by treatment with niacin (nicotinic acid fraction of vitamin B complex). — H. L. WILLIAMS, M.D. in Proc. Mayo Clinic, Feb. 6, 1946.

(The nicotinic acid (not nicotinamide) can be given by daily injection at first, then in tablet form 4 times daily or the patient can be trained to give it to himself. Nicotinamide does not have the vasodilating action of nicotinic acid.—Ed.)

Salicylates and Blood Clotting

There is little or no danger of bleeding during the administration of salicylates, even when 150 gr. (10 Gm.) is given daily. The Quick prothrombin time is often increased.—HUGH BUTT, M.D., in *J. A. M. A.*, August 25, 1945.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

Psychoanalytic Therapy

(Principles and Application)

By Franz Alexander, M.D., and Thomas M. French, M.D., with Staff Members of the Institute for Psychoanalysis, Chicago, Illinois. The Ronald Press Co., 1946. Price $5.00

This readable and understandable volume contains many reasonable and workable formulations collected through seven years of collective research in the field of psychotherapy. The authors have gotten away from the strictly classical procedures in psychoanalysis and have put into scientific practice the established principles of psychodynamics, which they have attempted to simplify and clarify.

Many case reports with results and discussions, of the more usual types of patients met with, are outlined. Emphasis, throughout the book, is on obtaining therapeutic results. It deserves a place in every physician's library, and is recommended to students, and nurses, as well as to workers in the field.

Fundamentals of Pharmacology

By Clinton H. Thienes, M.D., Ph.D., Professor of Pharmacology, University of Southern California School of Medicine.—Paul Hoebber, Inc., 1945. Price $5.75.

This book is designed to present in concise form the subject matter of pharmacology considered of practical importance to the student, avoiding the lengthy perusal of voluminous texts for essential facts. As the author states, a complete discussion of the therapeutic uses of drugs has not been attempted, but emphasis is placed on sources, chemical nature, preparations, dose, absorption, distribution, fate, excretion and action of drugs as determined experimentally.

The book is clearly written, and numerous references are given to the sources of experiments and data. A more complete bibliography of the latter would be helpful for those desiring to refer to the original article.

American Pharmacy

Editor, Rufus A. Lyman, M.D., Dean, College of Pharmacy, University of Nebraska. J. B. Lippincott Company, 1945. $8.00.

Fundamental principals and practices in pharmaceutical preparations and biologicals are outlined in one of the most unusual books ever published. It is beautifully printed by Lippincott. The modern pharmacist must have this volume to check on his technic, on his background of knowledge, on his awareness of new drugs and biologics.—H.C.

Electronics (Today and Tomorrow)

By John Mills, Sometime Member Technical Staff Bell Telephone Laboratories. D. Van Nostrand Company, 1945. $2.25.

The science of the negatively charged electrical particle, the electron, has advanced rapidly from a robust infancy into a precocious adolescence. Its pragmatic applications are encountered daily in devices and appliances of transportation and communication, of production and distribution, of office and home.

With maturity, electronics will be the concern of every civilized man. To the majority of physicians, whose sole contact with the electron was a didactic course in "modern physics," electronics emerges mysteriously from the obscurity of war-time technological research. Lest the reader underestimate the intimate relation between the electron and medicine, one need mention only that the roentgen tube, the atom-splitting cyclotron and the electron microscope are electronic devices. And these are but the pioneers in the important role which electronics is to play in modern medicine.

The book introduces the subject of electronics to the layman. It clearly and adequately describes the fundamentals of electronics from the atomic theory to the structure of the klystron, the rhumbatron and the cyclotron. It is a preface to the future.—C.D. Marple.

Borderlands of Psychiatry

By Stanley Cobb, M.D., Professor of Neuropathology, Harvard Medical School. Harvard University Press. $2.50.

A master psychiatrist writes masterfully a group of essays concerning various fields in psychiatry and psychology, including a presentation of his chart form for recording emotional episodes and physical signs and symptoms, to show the correlation between them.

The Physiology of the Newborn Infant

By C. A. Smith, M.D., Professor of Pediatrics, Wayne University College of Medicine, Detroit. Charles C. Thomas, 1945. $5.50.

Circulation, respiration in the fetal and neonatal stages, the blood, icterus, metabolism, nutrition and the digestive tract, renal and endocrine physiology—the basic facts of infant bodily function are assembled from all the experimental and clinical literature, in usable, easily grasped form.

Helping the Body in Its Work and The Healthy Home and Community

By I. Mace Andress, Ph.D., Formerly Editor of School and Health Dept. in Hygeia; I. H. Goldberger, M.D., Assistant Director of Health Education, New York City Public Schools; and Grace T. Hallock, Director, Welfare Publication Bureau, Metropolitan Life Insurance Company. Ginn & Co: Boston. 1945. Priced at $1.04 and $1.08 respectively.

Here are two text books designed to teach hygiene and health to children of the 7th and 8th grammar school grades, written by experts in the fields of public health and popular education. One book describes the tissues and functions of the human body, and stresses the reasons for taking care of it. The other deals with environmental factors such as water, milk, food, ventilation, cleanliness, safety, and first aid. An abundance of illustrations and question-and-answer columns and other teaching devices are utilized to stimulate the attention of the child reader. The gonadal aspects of living are entirely ignored.

Physicians should exert their influence to foster such teaching in their communities. It is essential that our young citizens be given an alertness and a sane point of view regarding health and hygiene.—I.J.W.

Penicillin and Other Antibiotic Agents

By Wallace E. Herrell, M.D., F.A.C.P., Consultant in Medicine, Mayo Clinic, Rochester, Minnesota. — W. B. Saunders Company. 1945. $5.00.

This is a scholarly work which outlines the methods of preparing each antibiotic, its physical and chemical properties, its action in the laboratory and in the clinic, how it is absorbed and excreted and in what conditions it is effective.

Unlike other contributions, the author has actually used penicillin in treating large numbers of patients; he thus speaks from experience rather than from a perusal of the literature and clipping of abstracts for a volume.

Complete details are given of all methods of administering penicillin, a very valuable asset for the practitioner. Clinical conditions are discussed as to the best preparations to use, such as: sulfonamides, penicillin or others.

The Management of Obstetric Difficulties

By Paul Titus, M.D., Obstetrician and Gynecologist, St. Margaret Memorial Hospital, Pittsburgh, Pa. Third Edition. The C. V. Mosby Company, 1945. $10.00.

This is the book for the general practitioner who wishes to know now to avoid obstetric emergencies and how to care for them when they do arise. Exact directions and technic are given. Effective illustrations drive home proper procedures. The third edition brings obstetrics up to date, with full details on penicillin, transfusions and newer anesthetics.

Pathology of Tropical Diseases

By Colonel J. E. Ash, M.C., U.S.A., Director, Army Institute of Pathology and Sophie Spitz, M.D., C.S., A.U.S., Army Medical Museum. W. B. Saunders Company, 1945. $8.00.

This handsome atlas is a fitting monument to the work of the Army medical corps. It presents briefly, what the disease is, its epidemiology (the sketches indicating routes of transmission of worms are very clear and valuable), clinical features, differential diagnosis, and pathology.

Hundreds of clinical photographs show the patient, the appearance of the lesion grossly and microscopically.

The contributions of army observers and photographers all over the world make this a very modern text in tropical diseases.

A Textbook of Surgery

By American Authors. Edited by Frederick Christopher, M.D., F.A.C.S., Associate Prof. Surg., Northwestern University Medical School. W. B. Saunders Company, 4th Edition, 1945. $10.00.

This massive volume (1,500 pages) contains papers on hundreds of different surgical topics, written by a man considered to know most about it. As in any such compilation, some of the essays are superb in text and illustrations, others are too brief, too rambling or too uninformative. On page 677, seven lines are used to tell the surgeon to apply a splint at once. The book would be more valuable if smothed into one continuous whole.

Synopsis of Diagnosis of Abdominal Surgical Diseases

By John A. Hardy, M.D., F.A.C.S., C. V. Mosby Company, 1945. $5.00.

An up-to-date, handy differential diagnosis text covering all surgical conditions of the abdomen, in infants and adults (one of the famous Mosby "Synopsis" series).

War Neuroses

By Roy R. Grinker, Lt. Col., M.C., and John Spiegel, Major M.C., A.A.F. Blakiston Press, 1945. $2.75.

A resume of war psychiatric experience and narcosynthesis treatment, by the famous exponent of release of tension during light pentothal sodium sleep and trained interrogation.

The Living Body (A Text in Human Physiology)

By C. H. Best, M.D., Professor of Physiology and N. B. Taylor, M.D., Professor of Physiology, University of Toronto. Henry Holt. $3.00.

An introductory text in the physiology of man. Sufficient detail is given to make it interesting and valuable to the average practitioner who wishes to know the physiologic background of the normal and abnormal.